COALITION FOR SAFETY SOONER

August 13, 2018

The Honorable Ajit Pai
Chairman
Federal Communications Commission
445 12th Street S.W.
Washington, D.C. 20554

Dear Chairman Pai:

The Transportation Infrastructure Owner and/or Operator (IOO) agencies involved in the Coalition for Safety Sooner want to bring to your attention the broad activity focused on deploying equipment that use the 5.9 Gigahertz Dedicated Short Range Communications (DSRC) spectrum for safety critical, life-saving transportation applications. As we have expressed in the past, DSRC is uniquely configured to enable continuous, low latency, and secure data exchanges between vehicles and the roadway infrastructure to support safety-critical applications. Connected Vehicle technologies based on DSRC have the potential to provide benefits, including increasing mobility, reducing crashes, and most importantly saving lives. DSRC communications technology is being deployed now.

Enclosed is a list of operational and pending DSRC deployments throughout the country. As you deliberate on the best use of this important spectrum, we feel it is important that you have this information available and know that many of us are actively using this spectrum. Please note there are 20 operational sites using DSRC in 12 states, and 40 additional sites in some stage of deployment. A link has been provided for each of these sites to provide background information on the nature of the deployment. IOOs throughout the country recognize the value of DSRC-based Vehicle-to-Infrastructure applications to enhance road safety, reduce crashes and fatalities, and are moving forward with deployment.

In addition to the sites listed here, we know there are others in some stage of development. We only included the sites we could quantify and verify. The Signal Phase and Timing Challenge, sponsored by several national transportation associations, has been generating significant interest in DSRC deployment by many IOOs.

Thank you for the opportunity to voice our support of this lifesaving technology and provide this tangible information about deployments. Please reach out to us with any questions. We encourage you to preserve this important spectrum for its intended uses – uses that are currently being deployed.

Sincerely,

Kirk T. Steudle, Director
Michigan Department of Transportation

Carlos Braceras, Director
Utah Department of Transportation

Enclosure

cc: Mignon Clyburn, FCC
Michael O'Rielly, FCC
Brendan Carr, FCC
Jessica Rosenworcel, FCC

Summary of Reported V2I Deployments Using DSRC Roadside Units

Updated August 7, 2018

In recent years, many transportation agencies have begun to deploy Dedicated Short Range Communications (DSRC) roadside units (RSUs) and on-board units (OBUs) to support vehicle-to-infrastructure (V2I) communications. These RSUs are being deployed at intersections and along corridors to provide data and share information that supports safety and mobility applications used by pedestrians and OBUs being installed in agency fleet vehicles, law enforcement and emergency response vehicles, transit vehicles, and private vehicles. This document is intended to show the scale of implemented and planned V2I deployment efforts nationwide. There are currently operational DSRC V2I deployments in at least 12 states, and other related projects in development in 26 states.

The following list presents the location, scope, and status of all known V2I deployments in the United States that include DSRC roadside units. Designations listed in the status column are defined as follows:

- Operational: the deployment is fully implemented and active.
- Underway: the deployment has received funding and is currently being designed and deployed in the field, but is not yet operational.

This list includes efforts that are conducted as part of United States Department of Transportation (USDOT) initiatives, such as the Connected Vehicle (CV) Pilot Deployment Program, Smart City Challenge, and Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Program, as well as deployments that are funded and implemented locally, such as those being deployed to meet the American Association of State Highway and Transportation Officials (AASHTO) Signal Phase and Timing (SPaT) Challenge.

Note that this list was assembled through informal reports by agencies and supporting industry and consultant staff. Although agency staff have reviewed this list and cited references of public notices of the deployments (note the references often do not include details of numbers of RSU deployments), the operational status and details of each deployment listed (including numbers of RSUs) have not been independently verified for accuracy. As this is a working document, the Coalition for Safety Sooner requests to be notified about errant, outdated, or incomplete information so that updates can be made, as necessary. This is intended to be a living document and will be modified as updates are received about deployment status changes or new deployments.

State	Location	Scope	Status
AL	Tuscaloosa[i]	85 roadside units on 5 corridors	Underway
AZ	Arizona Connected Vehicle Test Bed[ii]	5.5 mile corridor Emergency Response Vehicles 11 intersections	**Operational**
	L101, Maricopa County[iii]	20 transit and emergency vehicles 50 intersections	Underway

State	Location	Scope	Status
CA	California Test Bed (Palo Alto)[i] [iv]	Instrumented buses, trucks and emergency vehicles 11 intersections	**Operational**
CO	I-70 Mountain Corridor[v]	90 miles of Interstate 700 buses, CDOT vehicles and emergency vehicles 200 roadside units	Underway
	Denver Smart City Program[vi]	1,500 city fleet vehicles	Underway
	Arapahoe County[i]	10+ roadside units	Underway
DE	Smyrna[i]	11 intersections	Underway
FL	Tampa-Tampa Hillsborough Expressway[vii]	1,600 cars 10 buses 9 trolleys 500 pedestrians 46 roadside units	Underway
	Tallahassee[i]	34 roadside units, 21 intersections	**Operational**
	Gainesville[i]	Vehicles Pedestrians 45 roadside units	Underway
	Osceola County[viii]	2 roadside units	Underway
GA	North Avenue, Atlanta[i]	3.2 mile corridor	**Operational**
	State Routes 141 and 8, Atlanta[i]	54 intersections 12 freeway ramps	Underway
ID	Boise[i]	20-25 Intersections	Underway
	Eastern Idaho[i]	3 buses 1 roadside unit	Underway
IN	Greenwood[i]	6 intersections	Underway
MD	Howard County[i]	20 intersections	Underway
MI	Ann Arbor[ix]	3,150 vehicles 75 roadside units	Underway
	Southeast Michigan Testbed[x]	1,400 vehicles 29 roadside units	**Operational**
	Warren[i]	2 intersections	**Operational**
	Lansing[i]	4.5 mile corridor 9 intersections	**Operational**
	Macomb County	750 Roadside Units	Underway
		2 Roadside Units	**Operational**
	Oakland County	246 roadside units	Underway

State	Location	Scope	Status
		68 roadside units	**Operational**
	St. Clair County	30 roadside units	Underway
		7 roadside units	**Operational**
	Wayne County	265 roadside units	Underway
		17 roadside units	**Operational**
MN	University of Minnesota Eco-Driving Research[xi]	1 vehicle 1 roadside unit	Underway
	Minnesota Connected Corridor[i]	25 traffic signals	Underway
MO	Kansas City[i]	10+ roadside units	Underway
	Springfield[i]	10+ roadside units	Underway
	St. Louis[i]	10+ roadside units	Underway
NV	Downtown Las Vegas[i]	6 roadside units	**Operational**
	Washoe County[xii]	32 mile corridor 10 vehicles with DSRC Roadside Units	Underway
NY	New York City Connected Vehicle Project Deployment[xiii]	5,800 cabs 1,250 buses 400 trucks 500 city vehicles 317 intersections	Underway
NC	State Route 55[i]	20+ intersections	Underway
NH	Dover[i]	3 roadside units	Underway
OH	Ohio Turnpike[xiv]	50 miles of turnpike 38 vehicles 15 roadside units	Underway
	Smart Columbus[xv]	175 intersections 350 buses, 400 city vehicles, 50 trucks, 100 school buses, and 2,100 private vehicles	Underway
	NW 33 Smart Mobility Corridor[xvi]	35 miles of roadway 62 roadside units	Underway
PA	Harrisburg[i]	8 roadside units	**Operational**
	Cranberry Township[i]	11 intersections	**Operational**
	Ross Township[i]	11 Intersections	Underway
	I-76 Arterial[xvii]	160 roadside units	Underway
	Pittsburgh[i]	24 roadside units	**Operational**
		45 roadside units	Underway

State	Location	Scope	Status
SC	Greenville[xviii]	10 miles of interstate	**Operational**
TN	Chattanooga[xix]	Equip buses and intersections	Underway
	Knoxville[i]	17 roadside units	**Operational**
	I-24 Corridor[xx]	94-mile corridor (freeway and arterials) 162 roadside units (49 DMS and 113 signalized intersections)	Underway
UT	Salt Lake City[i]	4 buses 24 intersections operational	**Operational**
	Provo[i]	25 buses 47 intersections	Underway
VA	Virginia Connected Corridor[i]	Instrumented cars, motorcycles, bus and truck 51 roadside units	**Operational**
WA	Seattle[i]	3 roadside units	**Operational**
	Washington State[i]	24 intersections	Underway
WI	Madison[i]	4 mile corridor 20-30 intersections	Underway
WY	Wyoming Connected Vehicle Project Deployment[xxi]	250 cars 150 trucks 100 WYDOT vehicles 75 roadside units	Underway

Endnotes

[i] https://transportationops.org/spatchallenge

[ii] https://www.maricopa.gov/DocumentCenter/View/32895/ITE-Journal-Article-on-Anthem-Test-Bed

[iii] https://www.maricopa.gov/CivicAlerts.aspx?AID=368&ARC=686

[iv] http://caconnectedvehicletestbed.org/index.php/

[v] https://www.codot.gov/projects/smart-70

[vi] https://www.denvergov.org/content/denvergov/en/denver-smart-city.html

[vii] https://www.tampacvpilot.com/

[viii] http://www.fdot.gov/traffic/its/projects_deploy/cv/MapLocations/Osceolal.shtm

[ix] http://www.aacvte.org/

[x] http://www.gomobilemichigan.org/planetm/southeast-michigan-connected-vehicle-test-bed.html

[xi] http://www.mto.umn.edu/research/ProjectDetail.html?id=2015037

[xii] https://www.nevadadot.com/mobility/avcv

[xiii] https://cvp.nyc/

[xiv] http://drive.ohio.gov/projects/

[xv] https://www.columbus.gov/smartcolumbus/home/

[xvi] https://www.33smartcorridor.com/

[xvii] https://transportation-engineering.outreach.psu.edu/wp-content/uploads/2012/05/5c-DePan.pdf

[xviii] http://curf.clemson.edu/research-led-clemson-university-help-revolutionize-transportation/

[xix] https://www.utc.edu/faculty/mina-sartipi/research_transportation.php

[xx] http://midtenn.ashe.pro/wp-content/uploads/2017/08/ASHE_TS_May2017_05.pdf

[xxi] https://wydotcvp.wyoroad.info/